

ABSTRACT

The present invention provides a novel method of screening for a gene or an agent affecting cardiac function after or during hypoxia or anoxia, including the steps of:

- 5 providing an adult *Drosophila* in conditions able to induce hypoxia or anoxia, imaging the heart of the *Drosophila*, measuring the movements of the heart in the image, analyzing the measurements of the movements, and identifying a gene affecting the cardiac function of the *Drosophila* or identifying the effect of the agent on the cardiac function. The method may include administering an agent before, during or after
- 10 hypoxia.